



Mr. Steve Trent
Fluor Hanford Inc.
825 Jadwin Ave.
Richland, WA 99352

**Subject: Contract No. 630
Analytical Data Package**

Dear Mr. Trent:

Enclosed are the hard copy analytical reports for the batch number/fraction indicated (marked X) in the following table:

LvLI Batch #	0708L840
SDG #	H3570
SAF #	F07-043
Date Received	8/31/07
# Samples	3
Matrix	SOIL
Volatiles	
Semivolatiles	
Pest/PCB	
DRO/GRO/KRO	
Herbicides	
GC Alcohol	
Metals	
Inorganics	X



The electronic data deliverable (EDD) will be emailed shortly. If you have any questions, please don't hesitate to contact me at (610) 280-3012.

Sincerely,
Lionville Laboratory Incorporated

Orlette S. Johnson
Project Manager

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD F07-043 H3570

DATE RECEIVED: 08/31/07

LVL LOT # :0708L840

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
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B1P3K0

% SOLIDS	001	S	07L%S108	08/21/07	09/04/07	09/04/07
% SOLIDS	001 REP	S	07L%S108	08/21/07	09/04/07	09/04/07
CHROMIUM VI	001	S	07LVI072	08/21/07	09/04/07	09/04/07

B1P3K1

% SOLIDS	002	S	07L%S108	08/22/07	09/04/07	09/04/07
CHROMIUM VI	002	S	07LVI072	08/22/07	09/04/07	09/04/07

B1P3J9

% SOLIDS	003	S	07L%S108	08/15/07	09/04/07	09/04/07
CHROMIUM VI	003	S	07LVI072	08/15/07	09/04/07	09/04/07
CHROMIUM VI	003 REP	S	07LVI072	08/15/07	09/04/07	09/04/07
CHROMIUM VI	003 MS	S	07LVI072	08/15/07	09/04/07	09/04/07
CHROMIUM VI	003 MSD	S	07LVI072	08/15/07	09/04/07	09/04/07

LAB QC:

CHROMIUM VI	MB1	S	07LVI072	N/A	09/04/07	09/04/07
CHROMIUM VI	MB1 BS	S	07LVI072	N/A	09/04/07	09/04/07
CHROMIUM VI	MB1 BSD	S	07LVI072	N/A	09/04/07	09/04/07





Analytical Report

Client: TNU-HANFORD F07-043 H3570
LVL#: 0708L840

W.O.#: 11343-606-001-9999-00
Date Received: 08-31-07

INORGANIC NARRATIVE

1. This narrative covers the analyses of 3 soil samples.
2. The samples were prepared and analyzed in accordance with the methods checked on the attached glossary.

LvLI is NELAP accredited by the State of Pennsylvania. For a complete list of accrediting authorities and the corresponding analytes/methods, please contact your Project Manager. LvLI certifies that all test results meet the requirements of NELAC with any exception noted in the following statements.

3. Sample holding times as required by the method and/or contract were met.
4. The results presented in this report are derived from samples that met LvLI's sample acceptance policy.
5. The method blank for Chromium VI was within the method criteria.
6. The Laboratory Control Samples (LCS) for Chromium VI were within the laboratory control limits.
7. The matrix spike recoveries for Chromium VI were within the 75-125% control limits.
8. The replicate analysis for Percent Solids was within the 20% Relative Percent Difference (RPD) control limit however replicate analysis for Chromium VI was outside the control limit that may be attributed to sample inhomogeneity.
9. Results for solid samples are reported on a dry weight basis.
10. I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hard copy package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.


Jaim Daniels

Laboratory Manager
Lionville Laboratory Incorporated

9/13/07
Date

njp008-840

The results presented in this report relate to the analytical testing and conditions of the samples upon receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 13 pages.

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WET CHEMISTRY

METHODS GLOSSARY FOR SOIL/SOLIDS SAMPLE ANALYSIS

	<u>ASTM</u>	<u>SW846</u>	<u>OTHER</u>
% Ash	___ D2216-80		
% Moisture	___ D2216-80		___ ILMO4.0 (e)
% Solids	✓ ___ D2216-80		___ ILMO4.0 (e)
% Volatile Solids	___ D2216-80		
ASTM Extraction in Water	___ D3987-81/85		
BTU	___ D240-87		
CEC		9081	___ c
Chromium VI		✓ ___ 3060A/7196A	
Corrosivity ___ by coupon ___ by pH		___ 1110(mod) ___ 9045C	
Cyanide, Total		___ 9010B	___ ILMO4.0 (e)
Cyanide, Reactive		___ Section 7.3/9014	
Halides, Extractable Organic		___ 9020B	___ EPA 600/4/84-008
Halides, Total		___ 9020B	___ EPA 600/4/84-008
EP Toxicity		___ 1310A	
Flash Point		___ 1010	
Ignitability		___ 1010	
Oil & Grease		___ 9071A	
Carbon, Total Organic		___ 9060	___ Lloyd Kahn (mod)
Oxygen Bomb Prep for Anions	___ D240-87(mod)	___ 5050	
Petroleum Hydrocarbons, Total Recoverable		___ 9071	___ EPA 418.1
pH, Soil		___ 9045C	
Sulfide, Reactive		___ Section 7.3/9030B	
Sulfide		___ 9030B(mod)	
Specific Gravity	___ D1429-76C/	___ D5057-90	
Sulfur, Total		___ 9056	
Synthetic Preparation Leach		___ 1312	
Paint Filter		___ 9095A	
Other:	Method:		
Other:	Method		

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METHOD REFERENCES AND DATA QUALIFIERS

DATA QUALIFIERS

- U = Indicates that the parameter was not detected at or above the reported limit. The associated numerical value is the sample detection limit.
- * = Indicates that the original sample result is greater than 4x the spike amount added.

ABBREVIATIONS

- MB = Method or Preparation Blank.
MS = Matrix Spike.
MSD = Matrix Spike Duplicate.
REP = Sample Replicate
LC = Laboratory Control Sample.
NC = Not calculated.

A suffix of -R, -S, or -T following these codes indicate a replicate, spike or sample duplicate analysis respectively.

ANALYTICAL WET CHEMISTRY METHODS

1. ASTM Standard Methods.
2. USEPA Methods for Chemical Analysis of Water and Wastes (USEPA 600/4-79-020).
3. Test Methods for Evaluating Solid Waste (USEPA SW-846).
 - a. Standard Methods for the Examination of Water and Waste, 16 ed, (1983).
 - b. Standard Methods for the Examination of Water and Waste, 17 ed, (1989)/18ed (1992).
 - c. Method of Soil Analysis, Part 1, Physical and Mineralogical Methods, 2nd ed, (1986).
 - d. Method of Soil Analysis, Part 2, Chemical and Microbiological Properties, Am. Soc. Agron., Madison, WI (1965).
 - e. USEPA Contract Laboratory Program, Statement of Work for Inorganic Analysis.
 - f. Code of Federal Regulations.

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INORGANICS DATA SUMMARY REPORT 09/04/07

CLIENT: TNU-HANFORD F07-043 H3570
WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 07081840

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
=====	=====	=====	=====	=====	=====	=====
-001	B1P3K0	% Solids	82.8	%	0.01	1.0
		Chromium VI	0.24 u	MG/KG	0.24	1.0
-002	B1P3K1	% Solids	97.1	%	0.01	1.0
		Chromium VI	0.21 u	MG/KG	0.21	1.0
-003	B1P3J9	% Solids	96.6	%	0.01	1.0
		Chromium VI	0.24	MG/KG	0.21	1.0

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INORGANICS METHOD BLANK DATA SUMMARY PAGE 09/04/07

CLIENT: TNU-HANFORD P07-043 H3570
WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0708L840

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK10	07LV1072-MB1	Chromium VI	0.20 u	MG/KG	0.20	1.0

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INORGANICS ACCURACY REPORT 09/04/07

CLIENT: TNU-HANFORD F07-043 H3570
WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0708L840

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR (SPK)
-003	B1P3J9	Soluble Chromium VI	4.3	0.24	4.1	98.0	1.0
		Insoluble Chromium VI	1170	0.24	1230	95.2	100
BLANK10	07LVI072-MB1	Soluble Chromium VI	4.1	0.20u	4.0	102.9	1.0
		Insoluble Chromium VI	1120	0.20u	1230	91.3	100

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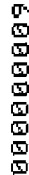
INORGANICS PRECISION REPORT 09/04/07

CLIENT: TNU-HANFORD F07-043 H3570
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0708L840

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE RPD	DILUTION FACTOR (REP)
=====	=====	=====	=====	=====	=====
-001REP	B1P3K0	% Solids	82.8	83.0 0.25	1.0
-003REP	B1P3J9	Chromium VI	0.24	0.32 29.1	1.0

0000000008



See SRC

Relinquished by	Received by	Date	Time
ORIGINAL REWRITTEN		11/11/01	11:00

20250515

00000011

SPECIAL HANDLING AND/OR STORAGE
Rad fu B INRC3

[illegible]

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
J.S. PUPP	8-22-07 1500	Mo 745 Frig	8-22-07 1500	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
Mo 745 Frig	AUG 30 2007 1100	M.A. Baechler	AUG 30 2007 1100	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
M.A. Baechler	AUG 30 2007 1100	Fed Ex		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
Fed Ex	8/31/07 0745		8-31-07 0745	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

PILOT MANIPULATION		CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST				T07-043-017		PAGE 1 OF 1	
COLLECTOR Bope/Pfister/Mokler		COMPANY CONTACT Trent, SJ		TELEPHONE NO. 373-5869		PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8N DATA TURNAROUND 45 Days / 45 Days	
SAMPLING LOCATION 5515, I-103		PROJECT DESIGNATION 216-A-2 and 216-A-21 Characterization Sampling and Analysis - Soil				SAF NO. F07-043		AIR QUALITY <input type="checkbox"/>	
DE CHEST NO. GRP-03-017		FIELD LOGBOOK NO.		COA 122868ES10		METHOD OF SHIPMENT FEDERAL EXPRESS			
SHIPPED TO Jonville Laboratory Incorporated		OFFSITE PROPERTY NO. See PTR 20151				BILL OF LADING/AIR BILL NO. See PTR 20151			
MATRIX* *Air *Drum *Jugs *Drum *Lids *Liquid *Oil *Soil *Sediment *Tissue *Vegetation *Water *Wipe *Other		POSSIBLE SAMPLE HAZARDS/ REMARKS Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)		PRESERVATION Cool 4C					
				TYPE OF CONTAINER G/P					
				NO. OF CONTAINER(S) 1					
				VOLUME 60mL					
		SPECIAL HANDLING AND/OR STORAGE Radio BWRCC2		SAMPLE ANALYSIS Chromium Hex - 7196					
SAMPLE NO.		MATRIX*		SAMPLE DATE		SAMPLE TIME			
P3J9		SOIL		8/15/07		1220			
						026004			
CHAIN OF POSSESSION				SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
S. Baechler		8/15/07 1545		M.A. Baechler		8/15/07 1545			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
L.A. Baechler		AUG 30 2007 1100		M.A. Baechler		AUG 30 2007 1100			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
Fed Ex		8-31-07 0945		Fed Ex		8-31-07 0945			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
LABORATORY SECTION		RECEIVED BY		TITLE		DATE/TIME			
FINAL SAMPLE DISPOSITION		DISPOSAL METHOD		DISPOSED BY		DATE/TIME			

Lionville Laboratory Incorporated
SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU HANFORD
Project/SAFE/DOH/Release #: F07-043

Date: 8/31/07

LvLI Batch #: 07081840

Sample Custodian: [Signature]

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier: <u>Fed Ex</u>	Airbill #: <u>790817791053</u>
2. Custody Seals on coolers or shipping containers intact, signed & dated?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> No Seals
3. Outside of coolers or shipping containers are free from damage?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
4. All expedited paperwork received (coc & other client specific information) sealed in plastic bag and easily accessible?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Samples received cooled or ambient?	Temp <u>4.8</u> °C	Cooler #: <u>GRP-03-017</u>
How was the temperature taken?	<input checked="" type="checkbox"/> IR <input type="checkbox"/> Temp. Blank	<input type="checkbox"/> Other (Specify):
Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
6. Custody seals on sample containers intact, signed and dated?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> No Seals
7. COC (Client & LvLI) signed & dated?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
8. Sample containers are intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
9. All samples on COC received?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
All samples received on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10. All sample label information matches COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
11. Samples properly preserved? (If #5 is no, then this is no.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
12. Samples received within hold times?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Short holds taken to wet lab?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
13. VOA, TDC, TOX free of headspace?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
14. QC stickers placed on bottles designated by client?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
15. Shipment meets LvLI Sample Acceptance Policy? (Identify all bottles that do not meet the policy, which is on the reverse of this page.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
16. Project Manager contacted concerning any discrepancies?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
Person Contacted _____	Date _____	

